REMARKS

Claims 1-15 are pending in the application. It is initially note that claim 2 was indicated as being allowable. This indication of allowable subject matter is noted with appreciation.

In the Office Action the claim for foreign priority has been acknowledged. However, the Examiner noted that the Applicants have not filed a certified copy of the German application as required by 35 U.S.C. §119(b). A certified copy of the priority will be submitted at a later date.

There was an objection to the specification. It is stated in the Office Action that the Abstract of the disclosure does not commence on a separate sheet in accordance with 37 C.F.R. §1.52(b)(1). Submitted herewith is an abstract of the disclosure on a separate sheet. In light of this submission, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1-15 were rejected under 35 U.S.C. §112, second paragraph. It is stated in the Office Action that the word "conductor" in claim 1 and the term "in particular" in claim 5 render the claims as being indefinite. Claims 1 and 5 have been amended to obviate the rejection and newly submitted claim 16 is offered to define the invention as the coaxial conductor (30) being cooled by water cooling. In view of the foregoing, withdrawal of the rejection is respectfully requested.

Claim 1 was rejected under 35 U.S.C. §102 as being anticipated by Selwyn (U.S. Patent No. 5,961,772). It is argued in the Office Action that Selwyn teaches the invention as set forth in claim 1.

Reconsideration and withdrawal of the rejection is respectfully requested. It is respectfully submitted that Selwyn does not teach the invention as recited in claim 1 of the present application.

The invention as set forth in claim 1 includes an interior chamber of the coaxial conductor between an outer conductor and an inner conductor. As explained on page 5, fourth complete paragraph of the present application, this feature allows for easy adjustment of the impedance of the device.

Selwyn discloses an atmospheric-pressure plasma jet. The plasma jet has a rod shaped electrode 14 which is located centrally in a conducting chamber 20. Gases are introduced into an annular region 18 of conducting chamber 20 through an inlet connected to gas source 16.

Selwyn fails to teach the limitation of "an interior chamber (31) of the coaxial conductor (30) between an outlet conductor (18) and inner conductor (19)" as recited in claim 1 of the present application. As previously discussed, by locating an interior chamber between the outer conductor and the inner conductor, it will be easier to adjust the impedance of the device. Selwyn at best discloses an electrode located in an annular region 18. Selwyn fails to disclose annular region 18 located between an outer conductor and an inner conductor as recited in claim 1 of the present application. In view of the foregoing, withdrawal of the rejection is respectfully requested.

Claims 3-10 and 15 were rejected under 35 U.S.C. §103 as being unpatentable over Selwyn. Since claims 3-10 and 15 are ultimately dependent on claim 1, it is respectfully submitted that these claims are patentable over Selwyn for at least the same reasons as discussed with respect to claim 1.

Claims 11-14 were rejected under 35 U.S.C. §103 as being unpatentable over Selwyn in view of Sakudo et al. (U.S. Patent No. 4,543,465). Since claims 11-14 are ultimately dependent on claim 1, it is respectfully submitted that claims 11-14 are patentable for at least the same reasons as discussed with respect to the rejection of claim 1.

Applicants submit that the application is in condition for allowance. If it is believed that the application is not in condition for allowance, the Examiner is invited to contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayments to Deposit Account No. 50-2036.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS

1. (Amended) Device to generate excited and/or ionized particles in a plasma from a process gas with a generator (11) to generate an electromagnetic wave, [a]an electric coaxial conductor (30) in which the electromagnetic wave is guided, and at least one plasma zone (20) in which the excited and/or ionized particles are formed by the electromagnetic wave, characterized in that an inlet (17) is available for inlet of the process gas into an interior chamber (31) of the coaxial conductor (30) between an outer conductor (18) and an inner conductor (19), and that the inner chamber forms the plasma zone (20).

5. (Twice Amended) Device according to claim 1, characterized in that the inner conductor (19) and/or the outer conductor (18) of the coaxial conductor (30) are cooled by means of cooling[, in particular, by a water cooling].

Claim 16 is added.

16. Device according to claim 1, characterized in that the inner conductor (19) and/or the outer conductor (18) of the coaxial conductor (30) are cooled by water cooling.

09/628,705

ABSTRACT

A device to generate excited and/or ionized particles in plasma with a generator to generate an electromagnetic wave and at least one plasma zone, in which the excited and/or ionized particles are formed by the electromagnetic wave. The plasma zone is formed in an interior chamber of a coaxial conductor for the electromagnetic wave.